Annual Report

Department of Fisheries

Prince Edward Island

for the year ended December 31st

1982

PRINCE EDWARD ISLAND FRESH FISH

TO HIS HONOUR

THE HONOURABLE J. A. DOIRON,

Lieutenant-Governor of the Province of Prince Edward Island

May It Please Your Honour:

I have the honour to submit herewith the Report of the Department of Fisheries for the period ended December 31, 1982.

I have the honour to be, Sir,

Your obedient servant,

HONOURABLE PATRICK G. BINNS

Minister

TO THE HONOURABLE PATRICK G. BINNS

MINISTER OF FISHERIES

Charlottetown, P.E.I.

Sir:

I have the honour to submit herewith the Report of the Prince Edward Island Department of Fisheries for the period ended December 31, 1982.

Respectfully submitted,

HARRY O'CONNELL

Deputy Minister

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FOREWORD

Harry O'Connell, Deputy Minister

The fishing industry in Atlantic Canada experienced mixed fortunes in 1982 with major problems particularly in the groundfish sector. The generally poor economic conditions of high interest rates and high inflation brought extreme pressure to bear on large processing operations already suffering from problems ranging from over capitalization to marketing. The Federal Government commissioned a major inquiry into the East Coast fishery under the chairmanship of Michael Kirby. The Kirby Commission carried out extensive research and study of the problems in the fishery and at year's end many in the industry were awaiting recommendations from the Kirby Report on solutions to the industry's problems.

Against this backdrop, the state of the fishing industry on Prince Edward Island in 1982 could be considered to be reasonable. Overall dollar returns to fishermen were up by some 10% over 1981 and although reduced landings were experienced in groundfish, as well as some shellfish and pelagic species, the lobster fishery was extremely successful in 1982 with record landings reported. Value of the lobster catch was also up in 1982 by 22%.

Although insulated to some extent from problems being experienced in the fishery in other parts of the region, P.E.I. also suffered the effects of the slowdown in the industry. One of the Island's largest fish processing plants, Georgetown Seafoods, did not operate in 1982. The resulting loss of employment and loss of an outlet for fish has had a negative effect on the Island fishing industry. As well, soft market conditions in the hake fishery have caused problems for Island fishermen and processors.

The P.E.I. Department of Fisheries addressed these and many other concerns of the fishery during the year including a major feasibility study on salt fish drying for P.E.I. and continuing efforts to revitalize Georgetown Seafoods.

1982 marked major changes for the Department with the termination of funding under the Comprehensive Development Plan and resulting re-organization. The Department now operates in the three areas of extension, processing and production. Extension efforts are aimed at working with fishermen and their organizations to provide information, training and technical advice. The role of the Processing Division is to provide advisory and technical support to processors to enable them to maintain efficient processing operations resulting in the production of top quality fish products. The Production Division of the Department concerns itself with identifying product availability, recognizing market potential and working with the industry to reach its potential.

The Department is now serving the industry with a "back to the basics" approach of addressing the areas of fishing, processing and marketing. As well, goals and objectives have been identified which are aimed at realizing the future potential of the Island fishing industry.

Opportunities exist for increasing returns from the fishery by obtaining a more equitable share of the resource in the Gulf of St. Lawrence and from the off-shore growth of stocks. The processing sector also offers the opportunity to increase value through processing of specialty products and increasing the ratio of product processed. A market opportunity exists by greater servicing of North American fresh fish markets and by better utilization of specialty markets. Another potential for increased returns is the processing and extraction of our seaplants here on P.E.I.

The budget commitment to Fisheries in 1982 totalled 1.4 million dollars and represents an increase of $500,000 in Provincial input to fisheries over the former cost-shared arrangement. The Departmental Budget for the 1982-83 year has provided a good level of programming for our fishing industry. New programs mounted included the Diesel Engine Conversion Program, the Fresh Fish Market Assistance Program, the Aquaculture Incentive Program and the Onboard Fish Handling Program. As well, the Provincial Vessel Subsidy Program was continued, as were information programs, resource monitoring assistance to the processing sector and increased emphasis was placed on marketing our products.

As mentioned at the outset the fishing industry in Atlantic Canada is facing troubled times and it is only through the cooperative efforts of government and the industry that P.E.I. will maintain and expand the level of its fishery. That cooperation has been quite evident during the past year and I want to express thanks to the various sectors of the fishing industry for their guidance and support during the past year. Fishermen, processors and their organizations have provided input to the Department planning process and have worked cooperatively with us in addressing various problems.

I also want to express my sincere thanks to the fisheries staff for their dedication and perseverance to their work during the past year.

PRINCE EDWARD ISLAND FISHERIES

The year 1982 remained steady for the P.E.I. fishery although landings decreased slightly by 1% giving a total of 112,986,563 pounds. The total landed value of all fishery products reached $35.4 million, an increase of 11% over the 1981 total value.

The industry presently employs approximately 5,275 people, approximately 3,275 in the fishery and 2,000 in processing. Many more are employed in industries which support the fishery such as outfitting and vessel construction. It is estimated that $80 - $85 million is contributed annually to the Prince Edward Island economy from the primary and secondary sectors and support industries.

Landing of pelagic and estuarial fish increased to 18,046,242 pounds, up from 14,034,657 in 1981. The value increased slightly by 9% reaching a total of $2.5 million. A major factor for the increase in landings was due to the herring fishery which reflected the largest percentage increase of any pelagic species. Landings of this species increased by 89% to reach a total of 11.47 million pounds with a value of $1.15 million. Smelt landings showed the greatest decline with a 75% decrease in landings compared to 1981.

Mollusc and crustacean landings increased by 6% to 18,672,812 pounds with a total value of $26.4 million. This represents a 19% increase in value over 1981. The lobster fishery did exceptionally well this year with an increase of 22% in value to reach a record of $22.6 million. Landings increased by 2.5% to give yet another record total of 12.2 million pounds. Quahaugs and bar clams have also showed significant increases in landings with a 75% and 43% increase over 1981 figures. Oyster and scallop landings showed declines with a decrease of 29% and 21% respectively.

Total groundfish landings in 1982 have declined to 42.2 million pounds representing a 6.5% decrease from 1981's figures. With respect to the dominant groundfish species, decreases have been recorded in landings of cod, hake, and flounder. However, redfish landings from the offshore fleet have increased from 10.6 million

pounds to 14.5 million pounds showing a 37% increase. The value of the redfish landings has increased from $1.0 million to $1.6 million representing a 60% increase.

Seaplant landings decreased by 3.4 million pounds to 34 million pounds for 1982. Compared to 1981, the landed value of seaplants declined by 9% giving a total of $1.7 million.

The landed weight and value for fish and seaplants in P.E.I. in 1982 with comparative figures for 1981 are as follows.

P.E.I. FISH LANDINGS AND VALUE 1981 - 82

SPECIES	1981 Pounds	1981 $000 Value	1982* Pounds	1982* $000 Value
GROUNDFISH				
Cod	12,511,139	$ 2,014	10,477,979	$ 1,309
Hake	13,077,204	1,307	10,362,808	1,036
Flounder	6,501,415	991	5,668,472	807
Red Fish	10,582,089	1,005	14,533,982	1,598
Haddock	196,974	49	2,562	.4
Halibut	2,029	2.3	14,867	15
Pollock	324,501	32.4	1,949	.2
Tomcod	50,109	1.5	12,555	.6
F. Meal	1,882,721	94	1,145,950	57
Catfish	4,182	.4	2,495	.2
Other	11,678	1.0	—	—
TOTAL	45,144,041	$ 5,498	42,223,619	$ 4,823
PELAGIC				
Tuna	483,287	$ 525	352,531	$ 387
Herring	6,071,630	631	11,474,624	1,147
Mackerel	5,157,175	598	5,274,422	632
Smelts	988,113	98	247,419	25
Alewives	713,747	85	284,157	34
Eels	467,671	353	280,316	238
Salmon	1,664	4.4	2,188	7.6
Silversides	151,370	15	83,288	8.3
Trout	—	—	22,000	44
Other	—	—	25,297	1.3
TOTAL	14,034,657	$ 2,309	18,046,242	$ 2,524
SHELLFISH				
S.S. Clams	773,129	$ 220	615,648	$ 203
Bar Clams	479,740	96	685,600	144
Quahaugs	667,554	200	1,165,013	466
Mussels	102,511	51	152,718	107
Oysters	2,686,275	1,426	1,917,585	1,016
Lobster	11,879,392	18,519	12,170,692	22,599
Scallops	389,527	1,568	307,111	1,075
O. Quahaugs	78,703	24	70,795	7
Snow Crab	550,592	154	1,587,346	762
Squid	73	—	127	—
TOTAL	17,567,496	$22,258	18,672,812	$26,379
TOTAL FISH	76,746,890	$30,065	78,942,673	$33,726
MARINE PLANTS	37,484,813	$ 1,874	34,043,954	$ 1,702
TOTAL	114,231,703	$31,939	112,986,627	$35,428

* Preliminary Figures

The following table shows the comparisons for P.E.I.'s landings and values, by species, groups, over the period 1960-1982.

Prince Edward Island, 1960 - 1982

Landings, Quantity and Values by Species
(In thousands of lbs. and thousands of dollars)

		Groundfish	Pelagic & Estuarial	Molluscs & Crustaceans	Marine Plants	Seafish Total Excluding Marine Plants	Total
1960	Q.	23,258	5,731	13,294	12,598	42,283	Q. 54,781
	V.	650	243	3,854	161	4,447	V. 4,639
1961	Q.	19,873	3,715	13,076	19,039	36,664	Q. 55,703
	V.	546	155	3,472	316	4,173	V. 4,489
1962	Q.	21,888	4,303	11,439	17,341	37,620	Q. 54,971
	V.	680	150	3,531	288	4,361	V. 4,649
1963	Q.	21,077	6,515	10,872	10,559	38,464	Q. 49,023
	V.	675	236	3,551	163	4,462	V. 4,625
1964	Q.	21,449	8,177	11,388	7,123	41,011	Q. 48,139
	V.	693	288	4,671	108	5,625	V. 5,750
1965	Q.	22,710	11,464	12,067	17,140	46,241	Q. 63,381
	V.	779	267	5,779	258	6,825	V. 7,083
1966	Q.	34,601	12,815	10,705	26,711	58,171	Q. 84,882
	V.	1,303	337	4,358	506	5,998	V. 6,504
1967	Q.	25,816	7,248	11,462	47,997	44,526	Q. 92,503
	V.	912	224	5,831	1,220	6,967	V. 8,187
1968	Q.	23,110	11,329	12,556	53,656	40,995	Q. 100,651
	V.	789	359	6,251	1,168	7,399	V. 8,567
1969	Q.	25,557	12,345	11,134	51,788	40,037	Q. 100,854
	V.	984	311	6,271	1,209	7,566	V. 8,777
1970	Q.	33,668	54,853	11,837	67,004	100,358	Q. 167,360
	V.	1,353	928	7,298	1,558	9,579	V. 11,167
1971	Q.	39,440	47,012	11,047	50,764	97,499	Q. 148,263
	V.	1,635	968	6,822	937	9,425	V. 10,361
1972	Q.	37,650	9,711	9,226	30,028	56,587	Q. 86,615
	V.	1,693	522	7,293	581	9,508	V. 10,089
1973	Q.	38,510	14,014	10,325	49,123	62,850	Q. 111,973
	V.	2,132	899	8,209	1,172	11,241	V. 12,414
1974	Q.	17,083	9,667	8,830	76,036	35,661	Q. 111,617
	V.	1,087	788	6,995	3,106	8,870	V. 11,977
1975	Q.	15,032	5,529	11,352	40,318	31,914	Q. 72,232
	V.	1,058	670	9,078	1,610	10,806	V. 12,416
1976	Q.	14,972	6,998	11,263	28,843	33,233	Q. 62,075
	V.	1,091	1,077	9,673	878	11,841	V. 12,719
1977	Q.	22,454	5,548	11,849	30,116	39,851	Q. 69,967
	V.	2,137	1,156	10,786	1,085	14,078	V. 15,164
1978	Q.	28,248	8,850	15,307	31,709	52,905	Q. 84,614
	V.	3,154	1,605	17,928	1,873	22,697	V. 24,560
1979	Q.	33,995	10,581	16,716	42,943	61,273	Q. 104,216
	V.	4,300	1,898	20,259	2,689	26,457	V. 29,146
1980	Q.	42,252	12,238	16,475	35,225	70,966	Q. 106,191
	V.	4,672	2,302	18,037	1,781	25,011	V. 26,792
1981	Q.	45,144	14,035	17,568	37,485	76,747	Q. 114,231
	V.	5,413	2,309	22,258	1,874	29,982	V. 31,856
1982	Q.	42,223	18,046	18,672	34,043	78,942	Q. 112,986
	V.	4,823	2,524	26,379	1,702	33,726	V. 35,428

ADMINISTRATION

Oswald MacKinnon

The approved budget allocated to the P.E.I. Department of Fisheries for the fiscal year April 1, 1981 to March 31, 1982 was 3.5 million dollars with 2.5 million dollars expended on approved programs under the Comprehensive Development Plan. (See Statement of Department Expenditures, page 38). The approved budget for the fiscal year April 1, 1982 to March 31, 1983 was 1.4 million dollars; however the transfer and amalgamation of the Department of Industry with Fisheries on October 28, 1982 will result in actual Department expenditures being greater than the singular Fisheries Budget.

The programs of the Department were carried out by 31 full time personnel during 1981 and 12 full time personnel during 1982. In addition, 25 - 30 seasonal employees were on staff during the peak periods of May to October 1981 and 1982.

During the period under review the organization of the Department was identified by four responsibility centres: Administration, Extension, Production, and Processing and Quality.

Primary functions carried out by Administration included accounting, personnel, secretarial services, budgeting, drafting and inventory control.

Chief planning functions carried out during the period under review included coordination of existing and planned fisheries programs, assistance in their preparation and making suitable financial arrangements for their implementation.

EXTENSION

Lewie Creed, Friend Herring
and Irwin Judson

The role of the Extension Division is to keep the fishing industry well informed and to provide feedback from the industry which can be used by the Department to develop sound policies and programs. This work includes information programs, fisheries promotion, assistance to fishermen and their organizations, provision of training and technical upgrading, assistance in planning port maintenance and development and encouragement and technical assistance to the aquaculture industry.

Three staff members provided service to the fishing industry through personal contact in assigned areas of East, Central and Western ports in the province. These staff members were also responsible for administering and delivering the following extension programs during 1982.

INFORMATION

A number of information programs were organized and carried out by the Extension Division during the year.

Radio Broadcasts

A weekly five minute radio broadcast covering fish prices and markets was produced by the Division during the period May 1 - November 30, 1982. The program was aired on radio stations CFCY, CHTN and CJRW on Saturday evenings.

The fish price report was also aired on CBCT-FM each Monday morning as part of the Island Report broadcast.

As a special service to fishermen, the Extension Division sponsored marine weather broadcasts on the three local radio stations during the peak fishing period of April to November. This service

was designed to assist fishermen by providing up-to-date weather information which they could use to make decisions on their fishing operations.

Booth Displays

Display booths were placed at major fairs and exhibitions held throughout P.E.I. during the summer months. The purpose of the displays was to increase and promote general awareness of the P.E.I. fishing industry and the role of the Department.

Three summer employees were responsible for assembling the display and supervising its operation at the various events. The display was placed at Bedeque Days, the Tignish Irish Moss Festival, the Summerside Lobster Carnival, the Tyne Valley Oyster Festival, Country Days and Old Home Week, Northport Day, Miminegash Day and the Kensington Harvest Festival.

Publication and Releases

The Extension Division revised and updated a number of species information pamphlets on lobster, cod, scallop, softshell clams, mackerel and smelts. In cooperation with the Market Development Centre two new brochures were designed and printed. The first was entitled "Out of the Sea and Over the Coals with P.E.I. Seafood". It covered instructions on how to barbecue a variety of Island seafood and provided recipes for preparing a number of barbecue fish dishes. The brochures were used in conjunction with the demonstration fish barbecues presented by the Department at a number of Island campgrounds during the summer of 1982.

The second new publication was entitled "From the Deep Sea to the Deep Freeze" and it covers proper methods for selecting and freezing fish and shellfish.

A second printing of the brochure "Prince Edward Island Cultured Mussels" was carried out during the year. As well the popular recipe booklet "Seafood Sensation, Volume II" was again reprinted and distributed as was the recipe card publication "Serve Supreme Seafood".

Brochures were printed providing details on four new programs of the Department. These brochures provided details on eligibility, amount of assistance provided and method of application for the Diesel Engine Conversion Program, Aquaculture Incentive Program, Fresh Fish Market Assistance Program and the Onboard Fish Handling Program.

The Extension Division also designed a promotional button with the logo "Serve P.E.I. Fish — It's Catching" and 5,000 buttons were produced. They were distributed at the booth displays and other functions and proved very popular.

One issue of the newsletter "The Lighthouse" was published during the year. As well, a number of news releases on projects and programs of the Department were released to local news media and national and international fisheries trade journals. Promotional advertisements were also prepared for a number of publications.

TECHNICAL UPGRADING

Through the Technical Upgrading Program the Extension Division assisted fishermen and processors to travel outside P.E.I. to view new fishing gear and equipment, attend worthwhile industry meetings or receive specialized training. As well, industry personnel from outside P.E.I. were assisted to travel to the province to pass on their particular expertise. During the year 1982 the following assistance was provided.

—Assistance was provided to an offshore trawler captain to participate in a deep sea trawling course in Hull, England.

—Two representatives of the P.E.I. Fishermen's Association were assisted in attending a one week fish technology course at the Technical University of Nova Scotia in Halifax.

—Marine Propulsion Seminars were held in Souris and Murray Harbour with instruction provided by marine architect, Alf Lohnes of CBCL Consultants of Dartmouth, N.S.

—Two fishermen were assisted to travel to Fish Expo, a major fishing gear show held in Boston in October, 1982.

—A group of six Island port committee chairmen was assisted to visit a number of fishing communities in Newfoundland. The group also visited Marine '82 a major fishing gear and oil industry trade show held in St. John's from November 17 - November 20, 1982.

—Assistance was provided to the P.E.I. Fishermen's Association to carry out a fact finding mission on salt fish markets in Southwestern Nova Scotia.

—A group of fishermen from Souris, P.E.I. was assisted to travel to Southwestern Nova Scotia to investigate fresh fish market opportunities for groundfish.

Through the Technical Upgrading Program the Department also gets involved in training for fishermen. During the January - March period of 1982, eight Record Keeping and Income Tax Preparation Courses were held throughout P.E.I. The courses were open to fishermen and their wives and were well received. The courses were presented by Holland College and were sponsored by P.E.I. Fisheries and the Atlantic Provinces Management Training Agreement.

In addition, the Extension Division worked closely with Manpower and Holland College officials to assess training needs in the fishing industry and ensure meaningful courses were offered. As a member of the Ad Hoc Committee on Fisheries Training the Division provided input on fisheries training.

Manpower Courses offered to fishermen and processors during 1982 included Nets and Gear, Coastal Pilot, Retort Operation and Quality Control.

AQUACULTURE

The farming of various species of fish and shellfish continued to develop on Prince Edward Island through 1982. The two growers of sea-water cage reared rainbow trout continued to expand their operations. They were successful in overwintering in fresh water ponds their undersize or unsold production from 1981. About a dozen new growers started experimental operations using fresh water.

Major progress was made in 1982 by the establishment of a privately owned hatchery in Brookvale. This hatchery using the principles of energy efficiency aims to provide Prince Edward Island fish farmers with locally grown fingerlings.

With encouragement and assistance from the Department of Fisheries, the trout growers formed the Prince Edward Island Trout Growers Association. Besides unifying the voices of the numerous growers, the Association appointed Committees to undertake tasks in legislation and policy, marketing, constitution, education, security and theft. The Department has been active in support of the Association's work particularly in the areas of policy and marketing.

Mussel culture has continued to grow in 1982 with the more serious growers moving considerable quantities to market and substantially enlarging their inventories for 1983. The Department assisted the establishment of the mussel industry in a number of ways in 1982 including the mussel buoy stockpile, meat yield analysis, production machinery, processing, transportation, winter harvesting and storage, and marketing, each of which is elaborated elsewhere in this report.

The Prince Edward Island Cultured Mussel Growers Association continued to address the concerns of the mussel grower and to speak for needs of the industry. In early 1982 the majority of growers in Southern Kings County joined together to form the Atlantic Mussel Growers Co-op to pool their resources for the purposes of transportation and marketing.

The oyster industry enjoyed a brisk year in 1982. Although landings were down from last year, demand was high with good prices and inventories moved early in the season.

Operations at the government owned Malpeque Oyster Cultures Inc. oyster hatchery were slowed during 1982 because of funding changes.

Since the sale of seed oysters ceased in 1977, 3505 - 5 peck boxes of spat had been spread on the Company's lease. The Company wished to see its oysters contributed to the P.E.I. oyster industry. Following various discussions with the P.E.I. Oystermen's Association

and the Federal Department of Fisheries and Oceans, agreement was reached with these agencies to undertake a project to relay the oysters from its lease for respreading in public fishing areas. Seven hundred, eighty nine boxes of seed were spread on grounds in the three counties of P.E.I. in 1982 and more oysters will be relayed next year.

Late in 1982 the Prince County Shellfish Association received Canada Community Development Program funds to conduct a shellfish enhancement project. Malpeque Oyster Cultures Inc. has made its facilities available to the project at nominal cost.

The project for the introduction of bay scallops to Prince Edward Island waters is continuing at the Ellerslie Fisheries Station. The Department's quarantine facilities have been made available to the project, now funded by Fisheries and Oceans. The quarantine period is now complete and fourth generation scallops have been trial outplanted at 14 different sites.

1982 marked the introduction by the Department of the Aquaculture Incentive Program which was devised with assistance in its design by the Trout Growers Association and Cultured Mussel Growers Association. The form of assistance depends upon whether (a) a mussel operation or (b) a trout opeeration is being established.

(a) Mussel Growing: A buoy stockpile was established upon which a mussel grower may draw up to 1,000 buoys. A total of 15,275 buoys valued at $37,200 were provided to mussel growers in 1982.

(b) Trout Growing: The trout grower submits his proposal for the development of his trout operation and indicates the specialized items for which he desires assistance to a maximum grant of $2,000. In addition, the grower is forgiven the costs of up to 500 fingerlings for the first year. Twelve trout growers received a total of $4,955 in repayable assistance during the year and 3,500 free fingerlings valued at $1,645 were provided.

In either case the grower is required to repay the value of assistance plus interest. When the assistance is repaid in full on or before the date of maturity, an incentive grant in the form of 25% deduction of the capital advance will be followed.

During its first year, twenty-four mussel growers and twelve trout growers have participated in the program. Feedback by these participants shows a highly favourable response.

PORT MAINTENANCE

The Department continued to provide for the minor maintenance and power consumption costs of 116 electrical services located at 57 Island fishing ports. These services include wharf lighting systems and electrical outlets as well as water system pumps. This service ensures that adequate lighting and water supplies are maintained and functional for the convenience and safety of all port users.

Also during part of 1982 the Department provided for the maintenance of fish unloading derricks, water systems and weather shelters at Island ports. However, in August of 1982 responsibility for these facilities was assumed by the Small Craft Harbours Branch of the Department of Fisheries and Oceans.

MAMMAL REMOVAL PROGRAM

The Department assumed responsibility for the removal and disposal of stranded mammals beginning in 1973 and in 1982 nine marine mammals (mainly seals) were identified at various shore locations and buried in the immediate area by local farm machine operators.

RESOURCE MONITORING

This program monitored the commercial catches and landings of a variety of species around the Island. The primary data collected are length frequencies of fin fish, meat count in scallops, and herring fat content.

Larger fish are basic to increased efficiencies from the vessel to the market. This program provides basic information that helps assess the province's position within the various fisheries management and industrial development strategies for the industry.

PRODUCTION DIVISION

David Younker, Bruce Lewis

The Production Division provides increased services to the fishing industry in recognizing market potential for product and working with the industry toward meeting this demand. Product availability is identified and markets are sought which offer adequate returns to the industry. Major objectives of this Division are — to promote the consumption of fish products both locally and outside the province — to provide market intelligence to the industry which can be used to reach informed decisions on markets to serve and product forms best suited to local employment and economic returns— to monitor supply of raw material with particular emphasis on ensuring P.E.I.'s participation and fair share of quota allocations — to provide a service to the industry in test marketing new products and to encourage the development of a fresh fish industry on P.E.I.

This Division, in conjunction with the Processing and Quality Division works with the fishing industry in developing new projects for expansion and modernization of processing capability in order to achieve the objective of more added value to the fish products of P.E.I.

A brief description of the programs carried out by the Production Division during 1982 is as follows:

TEST PRODUCTION

This project was designed to support the marketing function by developing pilot projects to evaluate new market opportunities identified within the fishery.

During the 1982 fishing season hake became the target species for much of the program effort. The hake fishery, of major importance to inshore fishermen, was faced with a very "soft" market situation in July of 1982, to the extent that a number of vessels tied

up for as many as six weeks during the fishing season. Buyers, concerned about markets, kept their inventories to a minimum, with the resultant effect that effort and landings were much reduced.

Numerous inquiries were made to secure a Portuguese vessel to purchase wet salted hake at an Island port. Of the twenty-eight companies contacted none were seriously interested in salted hake; cod was of singular concern.

A first-hand examination of the Toronto fresh fish market was made with follow up test shipments of fresh hake fillets being forwarded in the proper containers via Air Canada for market assessment. These fillets were sold to consumers as Canadian Whiting, derived from the common name of the species White Hake. Although the results were not as significant as anticipated, the program laid the groundwork for increased fresh fish sales in 1983.

Faced with the vacuum in the processing sector created by the closure of the Georgetown Plant, a number of western P.E.I. fishermen were forced to sell their fish round, to off-Island sources during the spring of the year. Agents for these fishermen (Howard's Cove Seafoods) were able to maintain the movement of fish on a daily basis with the support of the Department's program whereby insulated shipping containers for whole fish were provided on a minimum lease basis. In this way the inshore mobile fleet from western P.E.I. was able to remain fishing throughout the season.

A somewhat similar situation developed on Eastern P.E.I. The Department was able to put shore bound Souris fishermen in contact with a Nova Scotian buyer and by providing insulated shipping containers enabled the catching and sale of fish. Exporting raw material is definitely not in the best interest of the Island economy as a whole, but, given the circumstances facing the industry in 1982, at least the boats were able to remain fishing as there were buyers in Nova Scotia willing to invest in raw material.

Historically, P.E.I. exports wet salted hake to Nova Scotia firms who dry the fish for sale to the International markets in the Dominican Republic, Trinidad, Tobago, Puerto Rico, etc. Given the soft market of 1982 many Nova Scotian buyers were reluctant to purchase wet salted hake from P.E.I. leaving the local industry im-

mobile. The Department therefore sponsored a feasibility study for the Production and Marketing of Dried Salt Fish on P.E.I. Anticipating that a positive recommendation followed by positive industry initative would reduce industry dependence upon outside buyers the study was contracted to the Canadian Institute of Fisheries Technology, Nova Scotia, in association with A. Orlic & Associates Ltd., Halifax, Nova Scotia. Hopefully by 1983, P.E.I. fish producers will react to the study, reach for greater control of their affairs and provide much needed added value employment in the local economy.

In addition to the major emphasis on the hake fishery, the project participated in developments in the mussel, trout, and clam fisheries. Funds were provided to transport fresh mussels to the Montreal market-place in order to evaluate the best method of handling and shipping. The project designed and supervised by the Processing and Quality Division was very successful, having accomplished its objective, given the data from the trip. A second project was begun with North Ocean Enterprises of Souris to assess the feasibility of local quahaugs in new added value clam products. The project was not completed due to lack of raw material supply from phase one of the project.

Close liaison was maintained and technical assistance was given to the marketing representative for the Trout Growers Association in streamlining the sales of trout during the harvesting period. It is anticipated that other joint programs will be activated during 1983.

FRESH FISH MARKET ASSISTANCE

This program was designed to create a year round availability of fresh fish for Island consumers. The twelve month availability was to be achieved by developing an adequate wholesale outlet for fresh product, and by increasing the number of fresh fish retail outlets (fresh fish markets) across P.E.I.

The wholesale outlet, although not operational in the calendar year 1982, will begin to provide a variety of fresh fish in 1983.

Whole fish will be obtained mainly from Island sources and species that are not available on P.E.I. will be obtained from off-

Island. The fish will be processed by the wholesale facility and made available to retail outlets, fresh fish markets and fish peddlers for Island wide distribution.

During the calendar year 1982, the retail segment of the program, which provides for 50% of the capital costs of the facility and equipment to a maximum grant of $5,000, assisted in the establishment of four new fresh fish outlets, one in Prince County, one in Queens and two in Kings County. Three additional applications have been approved for operation in early spring of 83 with another two parties requesting assistance effective late spring 1983. The "Retail Study" carried out by the branch during 1982 indicated that given a reliable year-round wholesale outlet on P.E.I. for fresh fish an increasing number of retailers would become involved in marketing fresh fish to their customers. The Department is therefore confident that 1983 will mark the beginning of a new era for fresh fish availability and consumption on Prince Edward Island.

LAB AND TEST KITCHEN

This project was designed to make Islanders and visitors to the Island more aware of the fish species that are available and the proper methods for preparing them. The objective of the project as well was to improve the image of seafood products and encourage consumption in markets available to us.

Seafood demonstrations were carried out at campgrounds, fairs and exhibitions, and special events by two teams of two summer students. A student Home Economist served as supervisor of the two teams and organized activities for the summer months. The students also assisted staff of the P.E.I. Market Development Center in researching and testing seafood recipes, in revising a booklet on freezing seafood, and in researching materials for newspaper articles, radio shows and T.V. programs. As well a survey was conducted of the Island restaurants that served P.E.I. mussels to determine methods used in storing this shellfish and to offer any advice on the proper methods of holding mussels for a period of time. Posters, pamphlets and recipes were distributed to the major fish outlets throughout P.E.I. and advice given to those who recently opened retail seafood outlets.

Seafood barbecues were carried out on 54 occasions at campgrounds throughout the Province serving samples to some 3,567 individuals. Special barbecues and fish cooking demonstrations were put on at Canada Day celebrations, Tignish Irish Moss Festival, Summerset Manor Senior Citizens Family Day, R.D.C. Shellfish Training Program, Basin Head Museum and the Belvedere and Brudenell Golf Courses serving samples to approximately 1,550 individuals.

In all, the demonstrations throughout the summer served seafood samples, offered advice on fish preparation and explained where fish was available to a total of 5,117 individuals.

The Lab Facility itself served as a base of operations for Production Division summer employees, was also used by the Processing and Quality Division for yield and other specific tests on various fish species and as well was made available to fish processors and researchers for conducting numerous and varied experiments.

STATISTICS

Statistical information was compiled on a regular basis for the benefit of the fishing industry and the various levels of government.

Information was compiled on a weekly basis on fish prices and market conditions and provided to the industry through the Department's radio program and Island newspapers.

Information was updated in areas such as fish landings and values, inventories, seafood production, employment levels in fishing and processing and other related information.

A comprehensive study was carried out on consumer attitudes toward seafood; information was assembled on the availability and pricing of seafood in Island stores and detailed information was compiled on the tuna fishery on P.E.I.

Consumer Study

A consumer study on "Consumers Attitudes Towards Seafood" was carried out throughout P.E.I. in the summer of 1982. The study shows the attitudes of both urban and rural consumers toward

seafood. Their opinions and habits of purchasing and serving fish are discussed, as well as any problems they perceive with fish. There were 170 households who completed the study.

Information was collected on the following topics: likes and dislikes of fish; why, where and how frequently fish is purchased; serving methods of fish; cooking preparation of different fish species; comparison of fish to beef, pork, and chicken; use of recipes and storage information; fish preservation; and the popularity of seafood at school cafeterias and restaurants.

Some of the results of the survey were very interesting and are as follows:

(1) Ninety six percent of the participants do consume fish. A great majority of these people like fish because of its taste and nutritional value.

(2) The greatest percentage of people consume such species as lobster (90%), cod (81%), mackerel (76%) and clams (71%). As well, many people preferred scallops but found them too expensive to purchase.

(3) Fresh fish is served regularly (in season) by 70% of the home makers and it is considered a high status seafood product, second only to shellfish. The desire for greater availability of fresh fish throughout the year was frequently registered.

(4) Homemakers purchase fish from supermarkets, fish markets, fish plants, fish peddlers, and fishermen. 66% of fresh frozen fish and 44% frozen prepared fish is purchased at supermarkets while shellfish is obtained most frequently from fish plants (27%) and from fishermen (22%). Fresh fish is selected mainly from fishermen (28%) and fish peddlers (22%). More access to fish peddlers was a frequent request from the Charlottetown and Summerside Area participants. Fish of one form or another is purchased at least once a week during the year by 59% of the participants.

(5) As expected, homemakers felt that fish was more available during the fishing season than out of season. Eighty percent felt there were enough varieties of fish during the fishing season, while only 63% felt enough varieties were available after the fishing season terminated. Some participants found it hard to get Island produced and packaged fish in the winter and commented on the need for increased publicity of P.E.I. fish products.

(6) Some people felt that supermarkets could do a much better job in providing a seafood selection. In some cases people did not trust the freshness of the seafood that was available.

(7) A good majority of those surveyed do choose seafood when dining out, 38% prefer "scallops" and 35% prefer "fish and chips".

Tuna

This Division annually monitors and analyzes tuna fishermen's catch records to provide a base for future management decisions.

The bluefin fishery has grown from a total of five fish landed in 1967 to a high of 1048 fish landed in 1974. In 1981, 515 bluefin tuna were landed. Due to a reduction in the allowable quota for 1982 the number of tuna landed in 1982 dropped to 392.

In 1981 a "tended line fishing method" was introduced to this fishery. Rod and reel fishing continued from some ports, primarily by those fishermen who chartered their fishing boats. Three hundred fifty nine tuna were landed in 1982 by the tended line fishing method while 33 tuna were landed by rod and reel.

The average weight of a tuna landed in 1982 was 895 pounds with the largest tuna weighing 1235 pounds.

This Division represents the Department on the Atlantic Bluefin Management Committee. This Committee develops management proposals on an annual basis for consideration and approval by the Federal Minister of Fisheries and Oceans.

Following is a summary of the number of tuna landed by port for the past four years:

Port	1979	1980	1981	*1982
Skinners Pond	—	6	)	6
Sea Cow Pond	—	17	)328	40
Tignish	64	122	)	187
Malpeque	—	—	—	1
New London	—	2	—	—
North Rustico	7	14	12	14
Tracadie	—	2	—	—
Savage Harbour	21	18	6	5
Morell	35	30	9	4
Naufrage	50	34	12	10
North Lake	135	76	66	44
Souris	—	17	—	—
Fortune	—	2	—	3
Annandale	—	7	—	1
Launching	—	1	—	—
Georgetown	—	—	—	—
Graham's Pond	—	14	—	6
Beach Point	—	)	)	29
Murray Harbour	—	) 48	) 82	42
	312	410	515	392

* Preliminary Figures

GENERAL

Staff of this Division also represented the Department on a number of species management committees namely: Atlantic Groundfish Advisory Committee (AGAC), Snow Crab, Herring and Mackerel and Atlantic Bluefin Tuna. These committees develop management proposals on an annual basis for consideration and approval by the Federal Minister of Fisheries and Oceans. Provincial representatives help to ensure that the interests of the province are maintained through the negotiation procedure. Membership is also held on the P.E.I. Marketing Council and the joint P.E.I. Market Development Center — P.E.I. Fisheries Planning Committee.

PROCESSING AND QUALITY

Don Judson, Lloyd Murphy

The role of the Processing and Quality Division is to increase the availability and utilization of raw material, encourage innovative processing techniques and improve fish quality. Two personnel act as a resource center for the fish and seaplant processing sectors. The Division implements the P.E.I. Fish Inspection Act and Regulations and Provincial Vessel Subsidy, Fleet Development and Diesel Engine Conversion Programs. Support is also provided to the processor sector in the preparation of financial packages for new developments and loan guarantees.

Activities undertaken during the twelve months ending December 31, 1982 follow:

CULTURED MUSSEL DEVELOPMENT

Processing

The culturing of blue mussels introduced five years ago has resulted in a very successful industry. With the increased volume of product it became evident that processing techniques would have to become mechanized.

Early in 1982 the Division purchased three mussel processing machines from Europe. They were: declumping-washer-grader, debysser and desheller machines.

Atlantic Mussel Growers Co-op, representing approximately two thirds of the mussel growers on P.E.I. leased this machinery to test its efficiency and adaptability to P.E.I. cultured mussels. The Department provided a technician to work with the Co-op in the initial stage of set up, modification and test runs.

The declumping-washer-grader, and debyssing machines proved to be very satisfactory, producing a very clean marketable end product.

Experiments with the desheller were delayed until late in the season. Necessary modifications to the desheller and further trials will be carried out in 1983.

Meat Yield

A mussel meat yield monitoring program was established to assist the cultured mussel growers on P.E.I. Mussel meat yields vary considerably from area to area and at different times of the year. A three man team monitored eight different mussel growing sites from late April through to November. The sites were tested once every ten days with the meat yield and pearl counts analysed and recorded. The resulting data was mailed to mussel growers after each test.

This data proved invaluable to individual growers and to the industry in many aspects including growing, harvesting and selling buying operations.

ROCK CRAB PROCESSING

Two projects investigated the possible utilization of rock crab which is a very abundant crustacean in inshore waters surrounding P.E.I.

The shucking of whole meats and canning of the product for test marketing was undertaken. The canned product was packed in frozen and heat processed forms. The product was of acceptable quality; however, the processing operation is very labour intensive and for it to become economically feasible particular markets will have to be identified.

A second project consisted of processing the whole crab utilizing a deboning machine. The cooked body with back removed was put through the machine and the deboned product frozen in five pound blocks. The end product was sold to companies who would use it as stock in soups and chowders. Further market trials will be carried out in the spring of 1983.

FISH FILLETING INSTRUCTION

A professional fish filleter was made available to groundfish processors to assist them in improving their overall yield and quality of end product. The instructor worked with the plant employees and pointed out better bethods of filleting. He also demonstrated to the manager better processing techniques which could prove very economical to their overall operation. This filleter spent eight working days in each of three of the larger groundfish plants on P.E.I. The owners of these plants were very pleased with the work carried out in the short period of time and requested greater assistance along these lines in the future.

FISH QUALITY

Fish Inspection Act

The P.E.I. Fish Inspection Act and Regulations gives the province authority to ensure that seafood is bought, processed and sold under sanitary conditions. This is accomplished by assuring all establishments meet the required inspection standards. A qualified technician monitored all processing establishments during the summer and fall operating season, assisting them in identifying requirements necessary to bring individual establishments up to standard. He also worked with the operators to assist them in getting a better understanding of good fish plant practices.

During the 1982 season a total of sixteen non-export fish processing plants and thirty-six buyers were licensed.

Quality Control

A program was implemented to assist federally registered export fish processing plants on P.E.I. to show improvements in quality control procedures used in their facilities. A fisheries technician, enrolled in the two year fishery technology course at Holland College in Summerside, worked with quality control personnel in eight plants throughout the summer months. Work involved proper record keeping procedures, keeping of accurate inspection forms, understanding government regulations, demonstrating proper clean up procedures and general housekeeping practices and showing of short

films and presentations on why good personal hygiene of plant employees is so important. This program proved very successful and will be expanded next year.

FINANCIAL SUPPORT

Fish processors, fishermen and service industries, e.g. boat builders are assisted in preparing financial packages that will lead to development of their respective enterprises. Such packages include applications for development grants, capital or operating loans, and loan guarantees. The Division maintains a close liaison with industry organizations including seafood processors, boat builders and fishermen's groups and works cooperatively with them to develop their interests.

PROVINCIAL VESSEL SUBSIDY PROGRAM

This program, initiated on March 2, 1978 provides Island fishermen with a 15% subsidy on the total cost of new vessels to a maximum of $3,000.

The objective of the program is to encourage fishermen to continually upgrade the average age of inshore vessels engaged in the province's fishery and to remain current with changes in vessel construction and outfitting.

A total of 54 fishermen received the Provincial Subsidy on their new boats constructed in local boat shops during the fiscal year 1981-82. The total amount of subsidy paid out was $157,443 for an average of $2,915. per application. A total of 24 fishermen received the subsidy in the current fiscal year (to December 31, 1982). The total amount of subsidy paid was $63,407 for an average of $2,642.

The Department during its annual fall planning sessions with fishermen's and boatbuilding groups determined that fishermen should continue to purchase the boat model of his choice and that a differential subsidy should be available to those fishermen who construct vessel hulls in off Island boatshops but purchase their outfitting equipment from Island suppliers. To December 31, 1982 seven applicants have been assisted under this part of the program for a total of $11,500.

FLEET DEVELOPMENT

The fishery economy of P.E.I. is highly dependent upon the annual volume of raw material (fish landings) available to P.E.I. processing plants. It is in the province's best interest to increase this volume where possible and to ensure that all fish catches are landed in a quality oriented manner. In order to do this fishermen must have modern seaworthy boats capable of using current harvesting techniques in a most efficient manner. The Department initiated a fleet development program of providing financial incentives to fishermen to convert their vessels to diesel power, install onboard quality fish handling systems and expand the near and offshore fleet. The report on each segment of the program follows:

Diesel Engine Conversion Program

Diesel engines are more fuel efficient than gasoline models, maintenance is usually minimal and the operating life of a diesel engine is much longer than gasoline. The diesel engine is more reliable and dependable under arduous conditions. Although the initial investment for a diesel engine is somewhat higher than the gasoline engine, the savings realized from using less fuel (up to 50% less) would pay for the difference in a very short time. To assist fishermen with the initial high cost of conversion from gasoline to diesel engines, the Department provides a grant of 25% of the capital cost to a maximum of $2,500 for new diesel engines installed in existing vessels powered by gasoline engines for at least one fishing season. The program was initiated on April 1, 1982 and provided for retroactive applications back to November 15, 1979, those being approved at $1,500 and $500 for the year to November 15, 1981 and to November 15, 1980 respectively.

The total number of fishermen receiving financial assistance on their new diesel engines up to December 31, 1982 was 84. Seven received $500 each for the 1980 year, twenty eight received $1,500 each for the 1981 year and 49 for the past nine months to December 31, 1982 received assistance at the 25% rate to a maximum of $2,500. The total cost of the program to date is $155,384.

On Board Fish Handling Systems Program

The marketplace demands that fish be of high and consistent quality. In order to improve the quality of fish landed by larger

vessels the Department provides assistance to commercial vessel owners at the rate of 25% of the installed capital cost to a maximum of $10,000 for onboard fish gutting machinery and fish cooling units. On board fish gutting machines have been placed on two 65 foot draggers operating out of Georgetown. The cost of each gutter was approximately $19,000. Total assistance provided by this program to December 31, 1982 was $9,700.

Near and Offshore Fleet Development Program

The Department has been actively assessing alternate methods of increasing the overall annual volume of raw materials landed on P.E.I. by vessels larger than 30 gross tons. A limited number of these vessels can be engaged in the ground fishery in the Gulf Region based on license limitations. Options appear to be construction of near shore vessels by fishermen who now have the required licenses and the acquisition of new or used medium or large offshore vessels which have the required licenses with them. A policy has not yet been finalized however potential projects will be accepted with financial assistance depending upon the merits of individual proposals.

SEAWEED STABILIZATION PROGRAMME

The mixed moss (Irish Moss and Furcellaria) industry in Eastern Kings County was closed down in September 1981 for the remainder of the season as the main buyer had obtained sufficient mixed moss inventory. The Department in the interest of stabilizing the harvest of this portion of the seaplants industry entered into an agreement with P.E.I. Seaweeds Ltd. to continue to buy good quality mixed moss which the Province of P.E.I. would hold as inventory until normal shipping time to the overseas buyer in the Spring of 1982. The Province absorbed the inventory holding costs on $141,000 value of dried mixed moss which was delivered to the overseas buyer in March and May 1982.

Current economic conditions dictated that the main buyer would not be buying in the 1982 season again due to high inventory holding costs. A similar agreement between the Province and P.E.I. Seaweed Limited for the 1982 season resulted in the Province holding inventory to a value of $500,000 which will be delivered to the overseas buyer in the spring of 1983.

APPENDIX I

P.E.I. LOBSTER LANDINGS AND VALUES
(1920 - 1982)

V = Values in ($000's)
Q = Quantity in millions lbs.

	Q	V		Q	V
20	8.3	703.9	1950	9.9	1,963.0
21	6.4	255.3	51	8.3	1,702.0
22	8.8	651.4	52	8.4	1,849.0
23	9.7	878.8	53	7.0	1,997.0
24	6.5	564.8	54	7.4	1,977.0
25	7.9	661.1	55	8.3	2,324.0
26	6.6	601.8	56	9.7	2,725.8
27	6.3	617.1	57	8.5	2,456.3
28	6.6	553.1	58	8.0	2,510.2
29	7.4	621.5	59	8.4	2,843.2
Avg. 20's	7.5	610.9	Avg. 50's	8.3	2,236.8
1930	8.1	539.7	1960	10.1	3,212.3
31	9.4	553.7	61	9.5	3,055.0
32	11.5	551.7	62	8.7	3,218.9
33	9.2	396.2	63	7.4	3,155.8
34	7.7	536.0	64	7.8	4,210.8
35	6.4	467.8	65	8.8	5,176.6
36	6.0	544.4	66	7.9	3,925.7
37	5.8	524.8	67	9.0	5,223.8
38	7.1	458.8	68	8.7	5,328.9
39	7.9	464.4	69	8.2	5,375.3
Avg. 30's	7.8	503.8	Avg. 60's	8.6	4,188.9
1940	5.6	353.9	1970	8.7	6,231.2
41	6.0	469.2	71	8.2	5,860.6
42	6.4	694.8	72	7.3	6,360.8
43	6.0	999.9	73	7.7	7,503.2
44	6.6	1,119.7	74	6.2	6,347.0
45	8.1	1,503.6	75	8.6	8,135.5
46	7.9	1,982.7	76	8.5	8,510.5
47	6.2	1,070.0	77	9.1	10,012.0
48	6.5	1,411.9	78	11.1	16,648.6
49	6.8	1,388.4	79	11.8	18,073.9
Avg. 40's	6.6	1,102.4	Avg. 70's	8.7	9,368.3
1980	11.8	15,458.0	1982	12.2	22,599.0
1981	11.9	18,519.0			

STATEMENT OF DEPARTMENT EXPENDITURES

RESOURCE HARVESTING

Implementation

Administration	5,092		
Equipment			
Materials and supplies	4,544		
Salaries	93,982		
Travel	8,460	112,078	

Clam Resource Development

Materials and Supplies	2,161		
Salaries	4,742		
Travel	1,003	7,906	

Groundfish

Equipment	18,510		
Materials and Supplies	8,681		
Professional Services	15,304		
Salaries	4,391		
Travel	5,581	52,467	

Sea Plant Resource Development

Equipment	3,046		
Materials and Supplies	4,442		
Professional Services	6,200		
Salaries	17,667		
Travel	7,382	38,737	

Scallop Resource Development

Professional Services	9,000		
Salaries	4,984		
Travel	967	14,951	

Pelagic Species Development

Equipment	1,955		
Materials and supplies	3,783		
Professional Services	2,870	8,608	

Lobster and Under Exploited Species

Equipment			
Materials and Supplies	12,280		
Professional Services	6,247		
Salaries	6,761		
Travel	5,868	31,156	265,903

AQUACULTURE

Implementation

Administration	6,345	
Equipment		
Materials and Supplies	4,801	
Salaries	131,614	
Travel	9,829	152,589

Oyster Development Program

Equipment	1,708	
Materials and Supplies	26,313	
Professional Services	64,634	
Salaries	75,299	
Travel	7,343	175,297

Mussel Culture

Equipment	57,278	
Materials and Supplies	8,377	
Salaries	19,564	
Travel	11,091	96,310

Scallop Culture

Administration	921	
Equipment	1,996	
Materials and Supplies	8,999	
Professional Services		
Salaries	43,822	
Travel	6,122	61,860

Salmonid Culture

Administration	633	
Equipment	2,370	
Materials and Supplies	41,217	
Professional Services	40	
Salaries	40,680	
Travel	12,483	97,423

Seaplants — Resource Enhancement

Equipment	875	
Materials and Supplies	864	
Salaries	12,989	
Travel	4,195	18,923

Shellfish Development Unit

Professional Services		96,000	698,402

ECONOMIC PLANNING AND STATISTICS

Implementation

Administration	3,819		
Materials and Supplies	521		
Salaries	44,050		
Travel	2,347	50,737	

Fisheries Incentive Program

Grants			
Fisheries Incentive Program		110,992	

Financial Management

Salaries	14,615		
Travel	2,890	17,505	

Vessel Construction

Salaries	457		
Travel	94		
Grants			
Vessel Construction	156,441	156,992	336,226

EXTENSION SERVICES

Implementation

Administration	4,711		
Equipment	2,120		
Materials and Supplies	28,185		
Salaries	55,579		
Travel	9,345	99,940	

Technical Upgrading

Administration	545		
Salaries	250		
Grants			
Travel Grant for Fisherman	9,413	10,208	110,148

PRODUCT HANDLING

Implementation

Administration	2,488		
Materials and Supplies	1,213		
Professional Services	929		
Salaries	47,238		
Travel	5,926	57,794	

Water Systems			
Equipment	42,810		
Materials and Supplies	8,562		
Professional Services	500	51,872	
Ice Making Facilities			
Grants			
Ice Making Facilities		185,628	
Cold Storage			
Grants			
Cold Storage			
Haul-Out Slips			
Materials and Supplies			
Professional Services	10,297	10,297	
Primary Holding Facilities			
Grants			
Primary Holding Facilities		23,686	
Weather Shelters, Unloading Facilities			
Equipment	41,284		
Materials and Supplies	2,454		
Professional Services	80,211	123,949	
Wet Fish Storage			
Professional Services			
Port Electrical			
Materials and Supplies		74,980	528,206
PROCESSING AND QUALITY CONTROL			
Implementation			
Administration	2,386		
Equipment			
Materials and Supplies	297		
Salaries	22,652		
Travel	3,822	29,157	
In-Plant Quality Control			
Equipment			
Materials and Supplies	325		
Salaries	18,691		
Travel	3,585	22,601	

Laboratory and Test Kitchen			
Administration			
Equipment			
Materials and Supplies	13,137		
Salaries	9,314		
Travel	1,518	23,969	
Fish Quality Improvement Demonstration			
Professional Services			
Processing Facility Upgrading			
Professional Services		14,585	
Processing Technology Improvement			
Equipment			
Professional Services			
Seaweed — Market Stabilization			
Materials and Supplies	313		
Professional Services	1,275	1,588	91,900
DEVELOPMENT			
Administration			
Salaries	37,817		
Travel	303		38,120
SERVICES			
Administration	245		
Salaries	33,112		
Travel	342		33,699
ADMINISTRATION			
Implementation			
Administration	8,261		
Equipment	996		
Materials and Supplies	2,704		
Salaries	203,046		
Travel	15,324	230,331	
Financial Assistance			
Grants			
Holland College	24,842		
P.E.I. Seafood Processors	14,084		
P.E.I. Lending Authority	119,790	158,716	389,047
TOTAL DEPARTMENT OF FISHERIES			$2,491,651